

What is claimed is:

1. An antenna comprising:

a first core made of first magnetic material;

5 a coil including a conductive wire wound around a predetermined region of the first core; and

a second core made of second magnetic material, the second coil being operable to move at an inside of the coil.

2. The antenna according to claim 1,

10 wherein the first core has a recess provided therein, and

wherein the second core is operable to move in the recess of the first core.

15 3. The antenna according to claim 1, wherein the coil has a first region and a second region where the conductive wire is wound at a density larger than a density of the conductive wire at the first region.

20 4. The antenna according to claim 1, wherein the second region of the coil is provided at an end of the coil.

25 5. The antenna according to claim 1, wherein the second magnetic material has a magnetic permeability larger than a magnetic permeability of the first magnetic material.

6. The antenna according to claim 1, wherein the second magnetic material comprises magnetic material of Mn ferrite.

7. The antenna according to claim 1, wherein the first magnetic material comprises magnetic material of Ni ferrite.

8. The antenna according to claim 1, wherein the first magnetic  
5 material comprises magnetic material of rare earth material.

9. The antenna according to claim 1, wherein the second magnetic material comprises magnetic material of rare earth material.

10 10. The antenna according to claim 1, wherein the first magnetic material and the second magnetic material are identical to each other.

11. A communication system comprising:

a first communication device;

15 an antenna connected to the first communication device, the antenna including

a first core made of first magnetic material,

a coil wound over a predetermined area of an outer surface of the first core, and

20 a second core made of second magnetic material, the second coil being operable to move at an inside of the coil along the predetermined area of the first core; and

a second communication device operable to communicate with the first communication device via the antenna.